80/295/RVC

RESULT OF VOTING ON CDV

Project number:	Reference number of the CDV
IEC 61162-401 Ed.1	**80/261/CDV**
IEC/TC or SC	Date of circulation
TC 80	2001-03-23

Title of the TC or SC concerned
Maritime navigation and radiocommunication equipment and systems

Title of the committee draft:
Maritime navigation and radiocommunication equipment and systems - Digital interfaces -
Part 401: Multiple talkers and multiple listeners - Ships systems interconnection - Application profile

The above-mentioned document was circulated to National Committees with a request that voting take place for approval for circulation as an FDIS (or publication as a Technical Specification or Report)

Voting results

see printout attached

Comments received – see annex[1]

In the case that the approval criteria for acceptance have been met,

a ☒ The committee draft for vote (CDV) will be registered as an FDIS by (date) 2001-04.

DECISION OF THE CHAIRMAN (in cooperation with the secretariat), in the case that the approval criteria for acceptance have not been met or in the case of a draft Technical Specification or Report

b ☐ The committee draft for vote (CDV) will be published as a Technical Specification or Report by (date) ……

c ☐ A revised committee draft will be circulated as a committee draft for vote (CDV) by (date) ……

d ☐ A revised committee draft will be circulated for comment by (date) ……

e ☐ The committee draft and comments will be discussed at the next meeting (date) ……

NOTE — In the case of a proposal *b*, *c* or *d* made by the chairman, P-members objecting to such a proposal shall inform the Central Office with copy to the secretary in writing within 2 months of the circulation of this compilation (see ISO/IEC Directives, Part 1, 2.6.5).

Name or signature of the Secretary	Name or signature of the Chairman
M A Rambaut	Dr A Norris

ANNEX A

Result of Voting on CDV - Document 80/261/CDV

Project: IEC 61162-401 Ed.1
Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 401: Multiple talker and multiple listeners - Ship systems interconnection - Application profile
Circulation Date: 2000-04-07
Closing Date: 2000-09-15

Country	Status	Sent	Received	Vote	Comments
Belgium	P	2000-09-13	2000-09-13	Y	-
Canada	P	2000-09-15	2000-09-15	A	-
China	P	2000-09-15	2000-09-15	Y	-
Denmark	P	2000-09-11	2000-09-11	N	Y
Finland	P	2000-09-12	2000-09-12	A	-
France	P	2000-09-07	2000-09-07	Y	-
Germany	P	2000-09-13	2000-09-13	Y	Y
Greece	O	2000-09-13	2000-09-13	A	-
Ireland	O	2000-09-14	2000-09-14	Y	-
Italy	P	2000-09-15	2000-09-15	Y	-
Japan	P	2000-09-08	2000-09-08	Y	-
Netherlands	P	2000-09-14	2000-09-14	Y	-
Norway	P	2000-09-08	2000-09-08	Y	Y
Portugal	-	2000-09-12	2000-09-12	A	-
Russian Fed.	P	2000-07-10	2000-07-10	Y	-
Spain	O	2000-09-15	2000-09-15	Y	-
Sweden	P	2000-09-04	2000-09-04	Y	-
U.S.A.	P	2000-09-06	2000-09-06	Y	-
United Kingdom	P	2000-08-16	2000-08-16	Y	-

		Approval Criteria	Result
P-members voting: 13			
P-members in favour: 12 = 92 %		**>= 67%**	**APPROVED**
Total votes cast: 15	**Total against: 1 = 7 %**	**<= 25%**	**APPROVED**
Final Decision:			**APPROVED**

NOTES
1 Vote: Does the National Committee agree to the circulation of the draft as a FDIS:
Y = In favour; N = Against; A = Abstention.
2 Only votes received before the closing date are counted in determining the decision.
Late Votes: (0).
3 Abstentions are not taken into account when totalizing the votes.
4 P-members not voting: Egypt; Romania; (2).

Annex

Date	Document
2001-02-14	80/261/CDV

National Committee	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
DK			General	This evaluation will use selected examples of the documents to clarify the overall impression of the standards, which is as follows: The document stated that IEC 61162 is not for certified, safety critical use, but is only for data collection and ship wide integration. This gives no meaning when analysing the four sub standards IEC 61162-1,2,3 and 4. Low speed and CAN bus-based fieldbusses are to be used at plant level, otherwise it has no meaning. 1. The use of a communication protocol at plant level demands proper predictable behaviour and that the equipment is to be certified with this standard as communication interface. This is in contradiction with IEC 61162 which states it is intended to be used at plant level where regulations for behaviour exist (LR, DNV,...). 2. The IEC 61162 standard documents do not give a proper strict definition of the standard. It is not a profile document (as it should be) but a description of a proposed implementation.	The scope must be consistant. It seems that a change in scope has taken place during the editing process (some of the detailed chapters have the scope of satefy critical functions)	The scope section says that the protocol is to be used for integration at system level, and hence in safety related functions. However, it further states that the actual safety of a given implementation is dependent on a large number of factors of which the protocol is only one. It is ultimately up to call and other authorities to approve a specific ship or class of ships. IEC 61162-3 is intended to be such a plant level fieldbus and –4 is meant to complement this, not superceede it. It is believed that this is clear in the current CDV. No change.

National Committee	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
DK			General(cont)	3. It is not possible to use the documents to design and implement the protocol because the lack of proper strict and consistent description. 4. It is impossible to verify whether a given implementation conforms to the standard or not, based on the IEC 61162 documents. 5. Authorities like Lloyds and Veritas normally validate integrated ship control systems. This implies very formal definitions for response times, redundant considerations and other safety related topics. In short a communication standard for use in integrated ship control systems must take this in serious consideration and offer the necessary information for legislation.		

National Committee	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
DK				"401" is " A-profile specification, defines the application functionality and its implementation in an application layer protocol. The "401" document is intended to be the A-profile profile document. The contents table is in short: 1. Scope 2.Normative references 3.Definitions (data format in T-layer) 4.Dependence on T-profile 5.Functional requirements for MAU 6.Functional requirements for LNAs 7.Protocol defined as sequence diagrams 8.Message definitions 9.General identity codes 10.Data marshalling 11.Communication link between MAU and LNA 12.General principles for module functionality 13.Annexes with error codes etc. As the contents table indicates the "401" document describes internal behaviour in a proposed implementation of the A-profile. This encourages many internal state machines and intermodule communication protocol definitions. It seems that the MAU, LNA and other internal modules are described in a way where it is impossible to get a consistent overview or definition of the internals of the system. But this is of no interest to a profile document. The A-profile document should instead give a description of application interface and functionality on level 7 and the interface description against the T-profile(s). This is not the case with this document. If the intended use of the document is to make the base for an implementation this is not enough in quantity neither in quality. The document has many statements like "It is suggested that ..." 3. Section page 54.	The 61162-401 should be turned into a real profile document, and not a mixture of a communication standard and a "profile document".	It is believed that the IEC 61162-4 series of documents should be kept in the same style as the rest of the IEC 61162 series, i.e., with a certain emphasis on ways to implement the standard. It is believed that this makes the standard easier to read and use. However, less abstraction may perhaps give the impression of a less stringent profile document. This is a trade-off that has been made. No change will be made.

National Committee	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
DK				Different T-profiles are presented as a major feature of 61162. At page 12 Section 6 “T-profile network” it is stated that the standard does NOT specify how a system is to be constructed with more than one T-profile at the same time. This is only a weak statement “ *... this can be used to develop gateway nodes”.* In other words IEC 61162 is not designed with gateway and equivalent functionality. This is left as an exercise for those who implements IEC 61162 and therefore it will NOT give compatible solutions. In short: IEC 61162-401 is not a profile document for the A-profile. No protocol specification document for IEC 61162 exists.	One of the best ideas in the proposed standard is the A-/T-profile issue. The standard does not give sufficient details on developing new T-profile and how they will work together and give the demanded quality of service. Specification is highly needed.	Not agreed: All documents except for 410 are independent of what T-profile that is in use. The 410 standard gives some general guidelines to the creation of new T-profiles as well as implementation hints. Quality of service will, as commenter say, be highly dependent on T-profile in use and there is no practical way to include more on this without writing an actual new T-profile document. No change
NO		Input param	Editorial	Lack session as input	Include session as input	Changed accordingly.
DK			General	The document is NOT a profile document. It is in some way a loose description of an intended implementation of the 61162 protocol. It is nearly impossible to use the document to design an implementation of the standard, and later on analyse and verify the behaviour of an implementation/design. A standard description must be very strict and shall follow a definition paradigm (like the old JTC 1 TR 10000). Instead the document gives a rough overview of an internal design overview for a proposed implementation of IEC 61162. This way of describing IEC 61162 will cause a lot of problems because no profile documentation exists and therefore it is impossible to verify whether a given implementation conforms to the standard or not.		A prototype implementation has already been made, entirely based on these documents. The main bulk of technical comments that has been incorporated in the new release are based on experiences from this work: No change will be made.
DE 1	1.2		Editorial	1.2 Application Profile, third paragraph, second sentence **and** fourth paragraph, first sentence	Delete sentences, they contain terms of pre-IEC releases.	Agreed, paragraphs 3 and 4 removed. This item is also covered in def. of MiTS/PISCES in part 400.

National Committee	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
DE 2	2		Editorial	Normative references	Add following references “RFC 793” and “RFC 1920”, both are mentioned on page 11 “Internet (protocol)”.	Added, except using RFC 2500 instead of older 1920 (as in 410). Also changed definitions of IP, IPV4 and TCP/IP (3.2.10, 11 and 23) to refer to these standards as well as to part 410. Updated table 1 to correspond to new references and definitions.
NO	3.4.3	3	Editorial	Missing reference	Should be -400	Corrected
NO	5.1	Fig 2	Editorial	Missing paranthesis in label	Fix	Added parenthesis around ack.
NO	5.3.2	Pre-cond	Editorial	Wrong precond	First or should be and	Changed accordingly.
NO	5.3.3	1	Editorial	Full MCP does not exist	Remove ref to full MCP	Changed accordingly.
NO	5.6.1	Fig 6	Technical	Need extra state on left hand for handling delayed first ack.	Add MT_DELAYED_ACK state	The following two comments apply to fig 7 and 8 (not 6 and 7): The additional state is added for subscribe type transactions and the text is changed somewhat to explain this extra state.
NO	5.6.3	Fig 7	Technical	As 5.6.1/Fig 6		See previous.
NO	5.7	2	Editorial	Missing reference	Insert ref to –400.	Corrected
NO	6.11	Fig 18	Editorial	Idle state is actually deleted/non exist	Make deletion explicit	Modified state diagram accordingly and added explanation text to make sure extranous messages are deleted.
NO	6.13		Editorial	Full MCP does not exist	Remove ref to full MCP	Sentence delteted in full.
NO	6.2	2	Editorial	Make clear that the exchange of MAUREQ/ACK messages are only necessary for first local MAU.	Add clearification, check state diagram.	Added a note, emphasised that only one state diagram should be used for one and the same MAU.
NO	6.4.3	4	Editorial	No MAU password or format string is used in open message.	Remove passowrd and format string.	Removed.
NO	6.7.5	Fig 15	Technical	This may be simplified if all messages are received before checks. However, this may have side effects.	See if it can be simplified.	Added a note to allow this simplification, it is an implementation matter more than a standard matter. Also refined connection processing by inhibiting non-authenticated MAUs from connecting when limits are in force. Added a clause in 8.2.3.1 to the same effect.
NO	7.5.2	Tab 15	Editorial	Two middle rows in last column interchanged	Change again	Corrected as specified.
NO	8.2.1	Tab. 17	Editorial	Session code is two octets	Fix index numbers (11 for 13)	Corrected as specified.

National Committee	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
NO	8.3.2.2	Tab 31	Editorial	Length is 10	Change from 8 to 10	Corrected as specified.
NO	8.3.3.1	Tab 32/33	Editorial	Make clearer that local MAU id is the local LNAs ID code for the requested remote MAU.	Add explanation of field value.	Clauses and tables have been changed somewhat to make this point clearer.
NO	8.3.3.2	Tab 32/33	Editorial	Make clearer that local MAU id is the local LNAs ID code for the requested remote MAU.	Add explanation of field value.	Clauses and tables have been changed somewhat to make this point clearer.
NO	Annex B	Tab 52	Editorial	LM_OK and LM_RMAU_DOWN codes are listed twice.	Change	Deleted second occurrence of both.
NO	Annex B	Tab 52	Technical	The LM_MAU_NOT_FOUND code has a value of 0, same as LM_OK.	Must be changed to non-zero.	Changed to 21, also fixed missing references for this code and RMAU_DOWN.
DE 3	Annex D		Editorial	Compatibility between V3 and V4	Is this important for the standard? E.g. the different NMEA 0183 versions are not mentioned in the IEC 61162-1.	Not removed: As there is a certain installed base of MiTS compiant applications and that MiTS is being phased out, there is a need to give users of MiTS a short overview of what IEC 61162-4 is in relationship to that. The annex has been rewritten so that the reference is to respectively MiTS and IEC 61162-4 instead of versions. A small change has also been added to definition of version codes (3.2.24) to specify that earlier vesrion codes has been used by MiTS.